# PL /SQL ASSIGNMENTS

## PG SEMESTER-I

### Advanced DBMS LAB

1) **Account ( accno , coustomername , balance )**
   a) Write trigger to generate primary key i.e. accno automatically. Account number will be like S00001, S00002,…..,S00999 etc.
   b) Write down PL/SQL procedure which finds count of all even and odd balance records.
   c) Write a trigger on each deposit or withdrawal on account such that a new record will be inserted in the table.
   Transaction( Serialno , accno , transaction_type , transaction_date , oldbalance,newbalance)
   Serialno should be generated automatically using a sequence. Transaction type is either debit or credit.

2) **Emp( empno , ename , job , mgr , hiredate , sal , comm , deptno)**
   **Dept(deptno , dname ,loc).**
   a) Write a PL/SQL cursor that will list the details of the employees whose salary in less than 3000 and works as a manager.
   b) Write down a PL/SQL function or procedure that will take empno , jobs , as input and give a increment of 10 % if job in manager and 15 % else.
   c) Write trigger to generate primary key i.e. empno automatically. employee number will be like E00001, E00002,…..,E00999 etc.

3) **Account ( accno , coustomername , balance )**
   Minimum balance is 500
   a) Generate accno automatically with a trigger. Account number will be like S00001, S00002,, S00999 etc. It will also check validity of minimum balance.
   b) Write PL/SQL code to count the prime and non-prime balance value for the account records.
   c) Write trigger during update which will check whether the withdrawal is valid or not and give appropriate error message. It will also check the deposit limit of Rs.1 lakh per transaction and give proper error message.

4) **Message( msgno , msgtext ,mdate,from , to )**
   a) Generate msgid with a trigger, Message id will be like M0000001, M0000002 etc.
   b) Write PL/SQL cursor that will insert all the messages whose length in less than 100 character in a seperate table. SMS(smsid , smstext, smsdate, from, to)
   c) There is a daily message limit of 10 message per day. After that RS. 1/message will be charged. Implement this during messaging.

5) **Emp( empno , ename , job, mgr , hiredate , sal , comm , deptno)**

a) Write down PL/SQL code that will display and update salary by 10% where employee has spent more 10 years in service.
b) Write down trigger that will store all salary updates on employees in separate table with necessary data.
c) Find Junior most employee in each dept and give a 10% incentive.

6) **A student table contains student records like**
   Student (Roll, Name, Semester, Paper, Year, Marks, Grade)
a) Generate Roll number with a trigger. Roll no will be like S00001, S00002,….., S00999 etc
b) Write PL/SQL code to find grade of the students based on marks
c) Write trigger before on Student such that a failed student record will be inserted in a separate table. Marks will be inserted if it is lesser than full marks. If not give appropriate error message.
   ArrearMaster (Slno, Roll, Semester, Paper, Year, Marks).

7) **Account (accno , coustomername ,balance)**
   Only ATM transaction is suported

   a) Write a trigger on each deposit or withdrawal on account such that a new record will be inserted in the table.
   Transaction( Serialno , accno , transaction_type , transaction_date , oldbalance, newbalance,tcharge)
   Serialno should be generated automatically using a sequence. Transaction type is either debit or credit. tcharge is transaction charge is rupees.
   b) There are 6 free debit transaction per month. After that a bank charges Rs. 6 per transaction. Implement this with a trigger.
   c) Write procedure to find monthly spending of each customer and flag the months for each customer as green or red if the spending is less than or more than 1 lakh respectively.

8) General PL/SQL procedure/functions
   a) HCF of two numbers
   b) Checking Armstrong number
   c) Prime factor of a number
   d) Fibonacci sequence
   e) Name abbreviation
   f) Binary search
   g) Linear Search
   h) Bubble sort
   i) Grade calculation
   j) Student record insertion using record type

9) Write a procedure with no parameters. The procedure should say whether the current day is a weekend or weekday. Additionally, it should tell you the user's name and the current time. It also should specify how many valid and invalid procedures are in the database.

10) Write a procedure that takes in a zip code, city, and state and inserts the values into the zip codetable. It should check to see if the zip code is already in the database. If it is, an exception shouldbe raised, and an error message should be displayed. Write an anonymous block that uses the procedure and inserts your zip code

11) Create a package by defining first 5 procedure/functions of question 8. Show usecase.